

Appl. No. 10/709,783  
Docket No. 146128CT/GEM-0119

## REMARKS / ARGUMENTS

### Status of Claims

Claims 1-23 are pending in the application and stand rejected. Applicant herein provides clarifying remarks to overcome the rejections, leaving Claims 1-23 for further consideration.

Applicant respectfully submits that the rejections under 35 U.S.C. §102(e) and 35 U.S.C. §103(a) have been traversed, that no new matter has been entered, and that the application is in condition for allowance.

The accompanying remarks were not presented earlier because Applicant did not fully appreciate the nature of the Examiner's position until the Applicant was advised in more detail of the position by the final rejection.

No amendments have been made.

Applicant respectfully requests full consideration to the remarks presented herein, which Applicant believes are fully supportive of a determination that the application is in condition for allowance, and respectfully requests notice thereof.

### Rejections Under 35 U.S.C. §102(e)

Claims 1-3 and 5 stand rejected under 35 U.S.C. §102(e) as being anticipated by Acker (U.S. Patent No. 6,580,938, hereinafter Acker).

Applicant traverses this rejection for the following reasons.

Applicant respectfully submits that "[a] claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, *in a single prior art reference.*" *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987) (emphasis added). Moreover, "[t]he identical invention must be shown in as complete detail as is contained in the \*\*\* claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). Furthermore, the single source must disclose all of the claimed elements "arranged as in the claim." *Structural Rubber Prods. Co. v. Park Rubber Co.*, 749 F.2d

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707, 716, 223 U.S.P.Q. 1264, 1271 (Fed. Cir. 1984). Missing elements may not be supplied by the knowledge of one skilled in the art or the disclosure of another reference. *Titanium Metals Corp. v. Banner*, 778 F.2d 775, 780, 227 U.S.P.Q. 773, 777 (Fed. Cir. 1985).

The Examiner comments that Applicant's arguments filed March 27, 2006, have been fully considered but were not considered persuasive, and then proceeds to reject the claimed invention on essentially the same grounds as the prior office action dated January 3, 2006.

Applicant respectfully disagrees with the Examiner for all of the reasons presented in Applicant's arguments filed March 27, 2006, which are incorporated herein by reference in their entirety, and for the additional reasons provided below.

Regarding Independent Claim 1

Claim 1 recites, inter alia:

*"...indicating a skin entry position on at least one of the digital images;  
indicating the target position on at least one of the digital images;  
determining a trajectory path based on the skin entry position and the target position; and*

*moving the end effector along the trajectory path toward the target position when the person has substantially the predetermined respiratory state."*

Here, Applicant is claiming not only the indicating of a skin entry position and the indicating of a target position, but is also claiming the determining the trajectory based on the skin entry position and the target position.

In alleging anticipation, the Examiner, in addition to restating the rejection of the prior office action, further comments that "The trajectory path [of Acker] is in fact determined based on the initial skin entry position and the target position, as shown in Figure 1, points A' and T, *where point A' is located on the skin.*" Paper 20060607, page 2. (Emphasis added).

Applicant respectfully and wholeheartedly disagrees with the Examiner with regard to point A' of Acker indicating a skin entry position and being located on the skin.

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At column 10, lines 32-34, Applicant finds Acker to disclose "...as shown in FIG. 1, the displayed image on cathode ray tube 46 includes a depiction *A'* of the portion of the airway together with a representation 26' of the probe distal end." (Emphasis added).

Here, Applicant submits that point A' of Acker is clearly disclosed as being a point of *a portion of the airway*, and *not a point indicating a skin entry position*, as claimed.

Even if the Examiner meant to indicate that point A of Acker is located on the skin, Applicant finds point A to represent an airway of the patient P (see column 10, line 13), and not a point indicating a skin entry position. Also, point A of Acker is not used in determining the trajectory path.

In view of *point A' of Acker not being a point located on the skin*, as clearly disclosed by Acker, Applicant submits that Acker does not disclose each and every element of the claimed invention arranged as claimed, and therefore cannot be anticipatory.

More specifically, Applicant submits that Acker does not disclose *indicating a skin entry position* on at least one of the digital images, and does not disclose *determining the trajectory based on the skin entry position and the target position*, which are elements of the claimed invention.

Absent anticipatory disclosure of each and every element of the claimed invention arranged as claimed, a prima facie case of anticipation cannot be established.

Dependent claims inherit all of the limitations of the respective parent claim.

In view of the foregoing, Applicant submits that Acker is absent anticipatory disclosure of each and every element of the claimed invention arranged as claimed, and therefore cannot be anticipatory.

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Regarding Claim 3 More Specifically

Claim 3 recites, inter alia:

"...moving the end effector along the trajectory path when *a difference between the monitored respiratory state and the predetermined respiratory state* is less than or equal to a threshold value."

In alleging anticipation, the Examiner essentially reasserts the same argument presented in the previous office action dated January 3, 2006, but without addressing Applicant's remarks presented in the response paper filed March 27, 2006.

More specifically, the Examiner alleges anticipation by commenting that "The probe is advanced when the patient is in the selected respiratory state (col 3, line 50)..." Paper 20060607, page 4.

In respectful disagreement with the Examiner, Applicant finds Acker to disclose at col. 3, line 50, that "During the advancing step, the disposition of the probe is *determined...*" (emphasis added), which Applicant submits falls wholly short of anticipatory disclosure of moving the end effector along the trajectory path when *a difference between the monitored respiratory state and the predetermined respiratory state* is less than or equal to a threshold value.

Additionally, at column 4, lines 61-63, Applicant finds Acker to disclose "During some portions of the probe-advancing step, *the patient may be instructed to hold his breath...*", which Applicant submits falls wholly short of anticipatory disclosure of moving the end effector along the trajectory path when *a difference between the monitored respiratory state and the predetermined respiratory state* is less than or equal to a threshold value.

Absent anticipatory disclosure of each and every element arranged as claimed, Acker cannot be anticipatory.

In view of the foregoing remarks, Applicant submits that Acker does not disclose each and every element of the claimed invention arranged as claimed and therefore cannot be anticipatory. Accordingly, Applicant respectfully submits that the Examiner's

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rejection under 35 U.S.C. §102(e) has been traversed, and requests that the Examiner reconsider and withdraw of this rejection.

**Rejections Under 35 U.S.C. §103(a)**

Claims 4, 6, 8-23 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Acker in view of Stoianovici et al. (U.S. Patent Publication No. 2004/0162486, hereinafter Stoianovici).

Claim 7 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Acker and Stoianovici as applied to claim 6 above, and further in view of Schweikard, et al. (U.S. Patent No. 6,144,875, hereinafter Schweikard).

Applicant traverses these rejections for the following reasons.

Applicant respectfully submits that the obviousness rejection based on the References is improper as the References fail to teach or suggest each and every element of the instant invention arranged in such a manner as to perform as the claimed invention performs. For an obviousness rejection to be proper, the Examiner must meet the burden of establishing a prima facie case of obviousness. *In re Fine*, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988). The Examiner must meet the burden of establishing that all elements of the invention are taught or suggested in the prior art. MPEP §2143.03.

Additionally, Applicant respectfully submits that obviousness cannot be supported by a proposed modification that would render the prior art invention being modified unsatisfactory for its intended purpose. *In re Gordon*, 221 USPQ 1125 (Fed. Cir 1984); MPEP §2143.01.

In alleging obviousness, the Examiner essentially restates the arguments presented in the prior office action dated January 3, 2006, and further comments that "In this case, the motivation to... [combine references to arrive at the claimed invention] is found in the general knowledge available to one skilled in the art." Paper 20060607, page 3.

However, Applicant's arguments filed March 27, 2006, did not center only on a lack of motivation to combine references, but more specifically argued that the prior art

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*references failed to teach or suggest each and every element of the claimed invention arranged in such a manner as to perform as the claimed invention performs.*

Additionally, Applicant's arguments filed March 27, 2006, also argued that obviousness cannot be supported by *a proposed modification that would render the prior art invention being modified unsatisfactory for its intended purpose.*

As such, Applicant respectfully requests the Examiner to reconsider Applicant's prior arguments, which are incorporated herein by reference in their entirety, to remove the finality of this office action, and to provide a more complete non-final office action so that Applicant is afforded the opportunity to more fully respond to these rejections.

More Specifically And With Regard To Independent Claims 6, 15, 16, and 21

The Examiner acknowledges that Acker is deficient in disclosing the use of robotic devices in computer-assisted surgery, and looks to Stoianovici to cure the deficiency.

Dependent claims inherit all of the limitations of the respective parent claim and any intervening claim.

Claims 6, 15 and 16, recite inter alia, "...indicate a skin entry position... indicate the target position... *determine a trajectory path based on the skin entry position and the target position*...", which are also elements of independent Claim 1.

In view of Applicants remarks above regarding Claim 1, Applicant respectfully submits that these deficiencies of Acker are not cured by Stoianovici, and therefore a prima facie case of obviousness cannot be established.

Furthermore, the Examiner alleges that "The system is coupled with a percutaneous access of the kidney (PAKY) needle driver wherein the computer assisted surgery robot aligns the needle (paragraph 30) and the needle is then driven along the trajectory calculated between the target and skin entry points (paragraphs 41 and 65) selected by the user. As the movement of the needle is determined by the hardware controlling the PAKY needle driver system the speed and movement of the needle is inherently predetermined by the computer and sent to the robot moving the needle (figure 1)." (Paper 12082005, page 3).

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In comparing Stoianovici with the claimed invention, Applicant finds Stoianovici to disclose "At the radiologist's command the needle was inserted under direct fluoro supervision." (Stoianovici, paragraph [0065]). Applicant submits that Stoianovici does not disclose the "...computer inducing the end effector insertion device to move the end effector along the trajectory path toward the target position when the person has substantially the predetermined respiratory state", as claimed for in Claims 6 and 15. Applicant also submits that Stoianovici does not disclose "...moving the end effector along the trajectory path toward the target position when the person has substantially the predetermined respiratory state", as claimed for in Claims 16 and 21.

Accordingly, Applicant respectfully submits that the combination of Acker and Stoianovici fail to teach or suggest *each and every element of the claimed invention arranged in such a manner as to perform as the claimed invention performs*, and therefore cannot properly be used to establish a prima facie case of obviousness.

Yet furthermore, in comparing the combination of Acker and Stoianovici with the instant invention, Applicant finds Acker to disclose "...the probe is *advanced through an Airway A* as, for example, through the larynx and trachea...*external field transducers 40 cooperate with probe field transducer 30 to determine the position of ...the probe...*" (Acker, col 10, lines 12-17), and submits that incorporation of the "...*robot ... used to orient a needle* while maintaining its initial tip location and to perform the insertion of the needle" (Stoianovici, Paragraph [0027]) as taught by Stoianovici and suggested by the Examiner would render the respiratory probe transducer guidance system disclosed by Acker *unsatisfactory for its intended purpose* (an airway probe with transducer positioning that is modified by a robotic needle guidance system would render the Acker airway probe with transducer positioning unsatisfactory for its intended purpose as *the Acker "transducer positioning" system would be rendered moot by the introduction of the Stoianivici robotic needle guidance system*). As such, Applicant submits that there is no motivation to modify Acker as suggested by Stoianovici and alleged by the Examiner.

Accordingly, Applicant submits that Stoianovici is absent any teaching, suggestion, or motivation to modify Acker for the purpose of arriving at the claimed

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invention while maintaining Acker to be satisfactory for its intended purpose. As such, Applicant submits that absent a motivation to combine the references as alleged by the Examiner, a prima facie case of obviousness cannot be established.

In view of the foregoing, Applicant submits that the References *fail to teach or suggest each and every element of the claimed invention arranged to perform as the claimed invention performs* and are therefore wholly inadequate in their teaching of the claimed invention as a whole, and fail to motivate one skilled in the art to do what the patent Applicant has done *as such a combination would render the prior art being modified unsatisfactory for its intended purpose*, and therefore cannot properly be used to establish a prima facie case of obviousness. Accordingly, Applicant respectfully requests reconsideration and withdrawal of all rejections under 35 U.S.C. §103(a), which Applicant considers to be traversed.

In light of the foregoing remarks, Applicant respectfully submits that this response complies with 37 C.F.R. §1.116 and should therefore be entered, and with its entry that the Examiner's rejections under 35 U.S.C. §102(e) and 35 U.S.C. §103(a) have been traversed, and that the application is now in condition for allowance. Such action is therefore respectfully requested.



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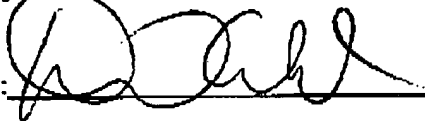
The Commissioner is hereby authorized to charge any additional fees that may be required for this amendment, or credit any overpayment, to Deposit Account No. 07-0845.

In the event that an extension of time is required, or may be required in addition to that requested in a petition for extension of time, the Commissioner is requested to grant a petition for that extension of time that is required to make this response timely and is hereby authorized to charge any fee for such an extension of time or credit any overpayment for an extension of time to the above-identified Deposit Account.

Respectfully submitted,

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